I.T. Medical Analysis and Reports

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Assessment of
Existing I.T. Infrastructure

Prepared for:

EXAMPLE

August 17, 2010

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Introduction

Thank you for spending time to discuss your Information Technology goals, concerns, and requirements within your business. Based on the goals we discussed and our understanding of your present systems, we are pleased to provide you with this initial assessment.

Our intent is that you will use this Initial Assessment as a starting point for further understanding and expansion of your company's technology. This document should evolve, as your technology needs change.

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Executive Summary

Overview

Bolt Networks was enlisted to provide an Initial Assessment of EXAMPLE existing IT infrastructure. We met with Dr. C. to discuss the current systems, as well as future plans for IT within EXAMPLE. The current IT services are being and have been provided by external sources.

Immediate Goals

The immediate goals as discussed with Dr. C. are:

- Evaluation of desktop hardware.
- Provide recommendation for hardware upgrades.
- Evaluation of desktop operating systems (Windows XP) and applications (MS Office).
- Provide recommendations for a standard and current operating system as well as desktop applications.
- Provide installation of customer purchased equipment.

Mid to Long Term Goals

This area is still to be discussed.

Concerns

We have located and will detail items that are of concern and we recommend that they be addressed as soon as possible. The items are included in the observations and recommendations sections that follow.

Next Steps

We recommend that EXAMPLE prioritize a list of immediate objectives, and schedule Bolt Networks to implement and support. We will develop a phased approach and project plan based on budget and priorities.

Observations

Following are summary observations based on our initial assessment of your IT infrastructure.

Server

There is one server. The server is providing central storage for eClinical Works. It is configured with an Intel® Zeon 2.13GHz CPU with 4096 MB of RAM running Microsoft Windows Server 2003 SBE.

Workstations

Your workstations have a wide variety of hardware configurations. Currently all of your workstations are running the Microsoft® Windows XP Pro, Microsoft® Windows XP Home, or Microsoft® Windows Vista Business operating system and Microsoft® Office 2003 for the office suite. For the purposes of this assessment, we will concentrate on CPU speed, RAM and hard drive size. The table below provides a snapshot of your workstation hardware.

User	CPU mhz	HD Size	RAM	Operating System
Dr. C.	1.67 gigahertz Intel Core 2 Duo	59.91 GB	2552 Megabytes	Windows XP Professional Service Pack 3
Rhonda W.	2.60 gigahertz Intel Pentium Dual-Core	249.93 GB	2014 Megabytes	Windows XP Professional Service Pack 3
Dr. M.	2.20 gigahertz Intel Pentium Dual	159.96 GB	2014 Megabytes	Windows XP Professional Service Pack 3
Dr. W.	1.67 gigahertz Intel Core Duo	55.13 GB	2040 Megabytes	Windows XP Professional Service Pack 2
Mariana C.	1.80 gigahertz Intel Pentium Dual	159.95 GB	1014 Megabytes	Windows XP Professional Service Pack 3
Dr. M.	1.50 gigahertz Intel Celeron M	36.72 GB	1016 Megabytes	Windows XP Home Edition Service Pack 2
Nancy C.	2.00 gigahertz Intel Pentium Dual	107.56 GB	1014 Megabytes	Windows XP Professional Service Pack 3
Tori V.	1.80 gigahertz Intel Pentium Dual	159.95 GB	1014 Megabytes	Windows XP Professional Service Pack 3
Jennifer M.	2.40 gigahertz Intel Core2 Duo	157.34 GB	2002 Megabytes	Windows Vista Business Service Pack 2
Dr. M.	2.00 gigahertz Intel Core2 Duo	117.34 GB	2038 Megabytes	Windows Vista Business

Virus Protection

There are two Anti-Virus applications installed (ESET NOD32 and AVG).

Internet Connectivity

The Internet is accessed through a DSL connection provided by SBC. Current speed of your connection is reported as 2.5 MB.

Network Management/Monitoring

There is currently no network management or monitoring tools in place.

Remote Access

Remote access is available for both incoming and outgoing communications. Microsoft Remote Desktop and Logmein are used for incoming access to the server.

E-mail

E-Mail service is provided for by Hotmail and is maintained off-site.

Network Security

A router is currently installed.

Software Updates (Server & Workstation)

Software updates frequently resolve bugs, security breaches, missing application features, and other problems. Your current support is only able to install software updates in a reactive mode.

LAN/WAN Environment

The internal network is using CAT5 cabling. There is no record of certification for cable drops installed.

Your network cabling is connected to your server and workstations with one hub.

The Internal address scheme is 192.168.16.X.

There is a printer attached to all workstations.

Disaster Recovery Plan

Backups are handled with on on-site hard drive solutions and offsite over the internet..

Software License Compliance

There is no software license compliance policy.

Recommendations

Following are recommendations based on our initial assessment of your IT infrastructure.

Server

The server seems to be in good shape. There is adequate operating and storage space available.

There are items that will need to be addressed when you transition from your current IT service provider to us:

1. Administrator passwords on the server will need to be changed.
2. Any unnecessary usernames should be purged.
3. Remote access to the server will need to be modified.
4. Administrator passwords for eCW will need to be changed.

Workstations

Most workstations seem to be in fair shape. The current operating system on one workstation is Microsoft® Windows XP Home. All workstations that access shared data on your network should be running Microsoft® Windows XP Pro. Microsoft and eCW do not support networking with the Microsoft® Windows XP Home edition.

It is our recommendation that all computers be upgraded to Microsoft® Windows XP Pro.

A check to verify that remote access software is removed from the workstations.

Virus Protection

Your workstations are configured with different AntiVirus packages. When the current license for AVG expires, change all workstations to NOD32.

Internet Connectivity

Internet is accessed through a DSL connection at 2.5MB. This connection should remain adequate.

We ran a quick check of Internet security online with running Shields UP checking for open ports and found no significant security risks.

Network Management

Studies show that 90% of workers admit to recreational surfing on company time, accounting for nearly one third of their online activity. Cyberslackers' favorite sites:

general news 29.1%; investment 22.5%; pornography 9.7%; travel 8.2%; entertainment 6.6%; sports 6.1%; shopping 3.5%; other 14.3%.

13.5 million workers slacked off and logged on in 1999 when the Starr Report was released via the Internet. Those cyberslackers cost US business $500 million in lost productivity.

The average cost to defend a Web-related patent-infringement claim is $1 million.

US corporations, government agencies, financial institutions, and universities lost more than $100 million to computer security breaches in 1999.

We recommend the following steps to keep employees in line while they're online.

1. Establish a written Internet Policy that prohibits employees from using company computer assets to visit inappropriate sites, or upload or download objectionable material from the Internet.
2. Clearly communicate the fact that the organization's computer resources are not to be wasted, but are to be used strictly for approved, business purposes.
3. Don't leave compliance to chance. Back up your Internet Policy with monitoring and filtering software.
4. Don't expect your employees to train themselves. Reinforce your Internet policy with on-going employee education.

Whether you're looking to boost employee productivity or reduce network congestion, there are tools available for reliable, flexible, easy-to-use Internet monitoring and web filtering. Designed to help your organization enforce its Internet acceptable use policy, these web filtering solutions allow you to proactively monitor, manage and, if necessary, block access to inappropriate web sites.

Remote Access

This should only be used on an approved basis. This approval should come from the Doctors. Policies and standardization is also important.

When you transition from your current IT service provider to us, you will want to modify and confirm all requirements for remote access.

E-mail

Your e-mail being hosted by “hotmail” does not portray a professional image with respect to electronic communications. Your current domain name should be able to host companywide e-mail for you as well. The server that you have installed might support company e-mail for you. If not, the hosting location for your web site should.

Network Security

A test of the network from "Shields Up" revealed no significant security risks from outside your organization. Your Firewall installed is operating as expected. Below is the report generated by “Shields Up”:

Attempting connection to your computer. . .

Shields UP! is now attempting to contact the **Hidden Internet Server** within your PC. It is likely that no one has told you that your own personal computer may now be functioning as an **Internet Server** with neither your knowledge nor your permission. And that it may be serving up all or many of your personal files for reading, writing, modification and even deletion by anyone, anywhere, on the Internet!

Your Internet port 139 does not appear to exist!

One or more ports on this system are operating in FULL STEALTH MODE! Standard Internet behavior requires port connection attempts to be answered with a success or refusal response. Therefore, only an attempt to connect to a nonexistent computer results in no response of either kind. **But YOUR computer has DELIBERATELY CHOSEN NOT TO RESPOND** (that's very cool!) which represents advanced computer and port stealthing capabilities. A machine configured in this fashion is well hardened to Internet NetBIOS attack and intrusion.

Unable to connect with NetBIOS to your computer.

All attempts to get **any** information from your computer have **FAILED**. (This is **very** uncommon for a Windows networking-based PC.) Relative to vulnerabilities from Windows networking, this computer appears to be **VERY SECURE** since it is **NOT exposing ANY** of its internal NetBIOS networking protocol over the Internet.

“Shields UP!” benignly probed the target computer at your location. Since these probing must travel from **their** server to **your** computer, administrative right-of-way to conduct probative protocol tests through any and all equipment located between your computer and the Internet was required.

Internal Security also needs to be addressed. We would also recommend security procedures and policies for internal users, i.e. changing passwords, acceptable use policies for e-mail and web browsing etc.

Software Updates (Server & Workstation)

Software updates frequently resolve bugs, security breaches, missing application features, and other problems. We recommend maintaining a consistent PC workstation profile, including up-to-date operating system builds, as well as primary applications.

We recommend that all workstations have the latest supported hardware drivers from their respective vendors. To ensure continued compatibility and improved performance

We recommend that the server and all workstations have the latest hot-fixes and security patches as recommended by Microsoft® to address security and compatibility issues.

LAN/WAN Environment

There are no areas of concern here.

Disaster Recovery Plan

As previously discussed, increasing your hard drive backup to more than one is recommended. When you change service providers, changing your offsite backup is also recommended. We currently use iBackup.com.

IBackup Professional offers the following plans:

Storage Space	Monthly Rate	Yearly Rate
15 GB	USD 14.95	USD 149.50
35 GB	USD 34.95	USD 349.50
50 GB	USD 49.95	USD 499.50

Software License Compliance

A verification of Microsoft licensing should be done. During the assessment, it was noticed that several workstations we using the same license code. This is generally caused by two ways:

1. You have purchased an eOpen license from Microsoft and have several licenses with the same code.
2. Your previous IT service provided was installing a bootleg copy of the software.

Either way, license compliance should be verified.

Software license compliance is becoming more important all the time. The penalty for non-compliance can be as high as any copyright infringement, and companies throughout the Country are being audited at the behest of Microsoft®, Small Business Alliance, etc. Employees who turn in employers are given a monetary reward, a percentage of the fine.

We recommend developing a policy regarding software usage and software license compliance. A specific person should be designated as the 'Software License Manager' and trained to collect and manage appropriate software licensing materials.

Useful information regarding training, software asset management tools, etc. can be found on the Software & Information Industry Association web site at http://www.spa.org/piracy/default.asp.

Data Collection Worksheet

Key Personnel Data Sheet

Employee Name	Location	Business Responsibility	Phone Number	Email Address	Role in technology decision process
Mariana C.	Front Desk		(714) XXX-XXXX		
Maria V.	Back Office		(714) XXX-XXXX		
Tori V.	Back Office		(714) XXX-XXXX		
Nancy C.	Coder/Account		(714) XXX-XXXX		
Rhonda W.	Billing		(714) XXX-XXXX		
Meghan H.	Scanner		(714) XXX-XXXX		
Dr. C.	Doctor		(714) XXX-XXXX		
Dr. M.	Doctor		(714) XXX-XXXX		
Dr. W.	Doctor		(714) XXX-XXXX		
Laura C.	Back Office		(714) XXX-XXXX		
Jennifer M.	Back Office		(714) XXX-XXXX		

Hardware Inventory

User	Location	Machine Name	Manufacturer	Model	Monitor
Dr. C.	Doctor's Office	Drchapmanws	Dell Inc.	Latitude D520 (JRKNLC1)	DELL E207WFP s/n TW95684L2BAL
Rhonda W.	Billing	Biller-a	Dell Inc.	Vostro 220 Series (BQTBPJ1)	DELL S1909WX s/n P702X92B00DS
Dr. M.	Doctor's Office	Drmartinws	Dell Inc.	Vostro 220 Series (F51VHG1)	DELL 2009W s/n G433H8BMASGU
Dr. W.	Doctor's Office	Drwangws	Dell Inc.	MP061 (7FG08B1)	DELL 2009W s/n G433H8ARAVXL
Mariana C.	Front Desk	Frontdesk	Dell Inc.	Vostro 200 (HWTDDG1)	Samsung 570S/580S TFT s/n H4KN801519
Dr. M.	Backoffice	Martin	Dell Inc.	ME051 (FBCHBB1)	LPL [Monitor]
Nancy	Billing	Nancy	Dell Inc.	OptiPlex 330 (G7SB7F1)	Amtran PL170M s/n 22B223700167
Tori V.	Backoffice	Nurse	Dell Inc.	Vostro 200 (5XTDDG1)	Samsung 570S/580S TFT s/n H4VN800547
Jennifer M.	Backoffice	Nurselaptop	FUJITSU	S7220 (R8Z02324)	LPL [Monitor]
Dr. M.	Exam	Tablet1	FUJITSU	LifeBook T4220 (R9100166)	LPL [Monitor]

User	CPU mhz	HD Size	Free Space	RAM	Operating System
Dr. C.	1.67 gigahertz Intel Core 2 Duo	59.91 GB	41.50 GB	2552 Megabytes	Windows XP Professional Service Pack 3
Rhonda W.	2.60 gigahertz Intel Pentium Dual-Core	249.93 GB	234.56 GB	2014 Megabytes	Windows XP Professional Service Pack 3
Dr. M.	2.20 gigahertz Intel Pentium Dual	159.96 GB	146.16 GB	2014 Megabytes	Windows XP Professional Service Pack 3
Dr. W.	1.67 gigahertz Intel Core Duo	55.13 GB	34.32 GB	2040 Megabytes	Windows XP Professional Service Pack 2
Mariana C.	1.80 gigahertz Intel Pentium Dual	159.95 GB	143.39 GB	1014 Megabytes	Windows XP Professional Service Pack 3
Dr. M.	1.50 gigahertz Intel Celeron M	36.72 GB	22.93 GB	1016 Megabytes	Windows XP Home Edition Service Pack 2
Nancy	2.00 gigahertz Intel Pentium Dual	107.56 GB	93.63 GB	1014 Megabytes	Windows XP Professional Service Pack 3
Tori V.	1.80 gigahertz Intel Pentium Dual	159.95 GB	141.95 GB	1014 Megabytes	Windows XP Professional Service Pack 3
Jennifer M.	2.40 gigahertz Intel Core2 Duo	157.34 GB	111.49 GB	2002 Megabytes	Windows Vista Business Service Pack 2
Dr. M.	2.00 gigahertz Intel Core2 Duo	117.34 GB	80.53 GB	2038 Megabytes	Windows Vista Business

Printer/Fax/Scanner Inventory

Location	Brand/Model	Connectivity	Serial Number	Type	Warranty Status
Billing	HP LaserJet 3015	USB	MXBM174233	LaserJet Fax	
Billing	HP LaserJet 2100	USB	USGG049730	LaserJet	
Backoffice	HP LaserJet P2035n	USB	CNB9D21258	LaserJet	
Frontdesk	Fujitsu Fi-6130	USB	59280	Scanner	
Nurse	Fujitsu Fi-6130	USB	44438	Scanner	
Backoffice	Sharp FO-4470		7710814	Copier/Fax	
Backoffice	HP DeskJet 6940	USB		DeskJet	

Server Inventory

	Server
Category	
Model	Intel Corporation S3210SH
Serial #	QSSY80300449
Speed	2.13 gigahertz Intel Xeon
RAM	4094 Megabytes Installed Memory
IP Address	192.168.16.2
Hard Drives	1250.25 Gigabytes Usable Hard Drive Capacity
Operating System	Windows Server 2003 Standard Edition, Small Business
	Server Restricted Service Pack 2 (build 3790)
Tape Drive	None
Role	Primary Domain Controller
Software	eClinicalWorks
	AVG Internet Security Version 8.5.0.426

Network Infrastructure Hardware

Role	**Location**	**Manufacturer**	**Model**
Router	Frontdesk	Cisco/Linksys	RV042
Firewall			
Hub	Frontdesk	Netgear	
Switches			
Wireless	Hall Ceiling	Cisco/Linksys	

EMR Readiness Assessment Email

1. Network Infrastructure
    - Cabling - Your office is currently cabled. Additional cable will be required where new computers will be installed.
    - Network Hubs – You are currently using a Netgear hub.
    - Static IP Address – Unknown
    - Internet Speed – Your speed is 420KB up and 2.2MB down. This should be upgraded for the number of users that you have.
2. Firewall – None - Local router was installed.
3. Wireless – None.
4. Fax Server – A dedicated computer will need to be provided and a MainPine fax modem will need to be purchased.
5. Scanners – None.
6. Exam Rooms – It was expressed that you would like to evaluate the cost for two ways of supporting your exam rooms
    I. Desktop computers in all five exam rooms
    II. Desktop computers in the three ultrasound rooms and a wireless tablet to be shared with the two procedure rooms.
7. Virus Protection – The office is using a few different types of virus protection. In most cases, outdated and unlicensed.
8. Existing Computers

Computer Name	CPU	Memory	OS
Steph	Celeron 2.0	2GB	XP Pro SP3
Front Desk	Celeron 2.4	512MB	XP Pro SP2
Asst	Celeron 2.4	256MB	XP Home
OfficePC	Dual Core 2.2	2GB	Vista Home P
Masonly-pc	Dual Core 2.2	2GB	Vista Home P

Based on these areas of evaluation, the following is recommended:

1. Network Infrastructure:

- Cabling – Additional cabling will be needed to support the exam rooms and the lab.
- Static IP Address – This is only necessary with the ASP hosting solution. If ASP is the hosting solution that is selected, AT&T will need to be contacted to verify/modify the connection type.
- Internet Speed – The download speed is fine. If you select the ASP hosting solution, the upload speed will need to be upgraded.

2. Firewall - Purchase a Sonicwall TZ firewall to provide secure internet access. This is also required if the ASP hosting solution is selected.
3. Wireless - Purchase a Cisco Wireless Access Point to support the Tablet PC.
4. Fax Server - Purchase and install a dedicated fax station with a MainPine fax modem.
5. Scanners - Purchase and install two new scanners. One for the front desk and one for the back office.
6. Exam Rooms – Two options: 1) dedicated computers in all five rooms. 2) Dedicated computers in the ultrasound rooms and shared tablet pc in the procedure rooms.
    1) Purchase and install five new computers for the exam rooms.
    2) Purchase and install three new computers for the ultrasound rooms and one table PC to support the procedure rooms.
7. Purchase the upgrade for Symantec End Point protection.
8. Existing computers – Three will need to be replaced. The do not meet the minimum required hardware specifications defined by eCW. The two computers that meet the hardware specifications will need to have their operating systems upgraded.
9. LAB – Purchase and install a computer to support the nursing staff and lab area.